

REMARKS

The examiner is thanked for the performance of a thorough search. By this amendment, Claim 63 is amended and no claims are added or canceled. Hence, Claims 1-3, 5-29, 31-55, and 57-78 are pending in the application.

Each issue raised in the Office action mailed November 1, 2007 is addressed hereinafter.

I. ISSUES RELATING TO THE CITED ART

Claims 1-3, 5-10, 12, 14-16, 18-29, 31-36, 38, 40-42, 44-55, 57-62, 64, 66-68, and 70-78 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,675,382 issued to Foster (“*Foster*”) in view of Oreizy et al. (“*Oreizy*”). This rejection is respectfully traversed.

A. CLAIM 1

Claim 1 recites:

A method of dynamic installation and activation of software packages in a node in a distributed network of nodes, the method comprising the computer-implemented steps of:
storing, in a software package storage of a master node in the distributed network, a plurality of software packages and a plurality of software modules that the nodes in the distributed network will be using;
wherein each software package of the plurality of software packages contains at least one module and associated dependency information;
receiving a software update for a node on said master node;
wherein the software update contains a set of one or more software packages;
storing the software update on said software package storage;
wherein said master node notifies said node that a software update is being requested;
wherein said master node passes said node identities of one or more software packages to be updated and module dependencies;
wherein said node determines, using the module dependencies, running processes on said node that will be affected by the software update.
(emphasis added)

At least the above-bolded elements of Claim 1 are not taught or suggested by *Foster* or *Oreizy*, either individually or in combination. The Office action concedes that *Foster* “does not explicitly disclose that said node determines, using the module dependencies, running processes on said node that will be affected by the software update and said master node notifies said node that a software update is being requested” (page 4). The Office action then cites section 1, 4th paragraph and section 6, 2nd paragraph of *Oreizy* for disclosing “wherein said node determines, using the module dependencies, running processes on said node that will be affected by the software update” as recited in Claim 1 (pages 4-5). This is incorrect. Those cited portions merely state:

A distinctive feature of software architectures is the explicitly modeling of connectors. Connectors mediate and govern interactions among components, and thereby separate computation from communication, minimize component interdependencies, and facilitate system understanding, analysis, and evolution.

In the C2-style, all communication among components occurs via connectors, thus minimizing component interdependencies and strictly separating computation from communication. The style also imposes topological constraints: every component has a “top” and a “bottom” side, with a single communication port on each side. This restriction greatly simplifies the task of adding, removing, or reconnecting a component. (emphasis in Office action)

These cited portions of *Oreizy* have nothing to do with whether a node, which is to receive a software update, determines **running processes** on the node that will be affected by the software update. None of the elements in these cited portions of *Oreizy* can be equated to the recited node of Claim 1 and the recited running processes of Claim 1. Neither the “connectors” nor the “components” of *Oreizy* can be equated to the recited node of Claim 1 because neither connectors nor components determine running processes that will be affected by a software update. Rather, according to *Oreizy*, connectors are used to minimize component interdependencies to facilitate efficient runtime change.

The node of Claim 1 is one node in a distributed network of nodes. In another part of the Office action, the examiner equates the processing node in section 3, 6th paragraph of *Oreizy* with the recited node in Claim 1. However, there is no mention of such a processing node in the other cited portions of *Oreizy* quoted above.

Section 3, 6th paragraph is the most pertinent portion of *Oreizy* with respect to this feature of Claim 1. That portion of *Oreizy* states:

When a runtime change is required, **a reconfiguration manager orders processing nodes directly affected by the change** and nodes directly adjacent to them **to enter into a “quiescent” state**. While in the quiescent state, a node is expected not to initiate communication with peers. This ensures that nodes directly affected by a change will not receive service requests during the course of the change. (emphasis added)

This portion of *Oreizy* discusses changes only at the level of the node, not at the level of **processes that are running on a node**. The Office action explicitly equates (1) the reconfiguration manager of *Oreizy* with the recited master node of Claim 1 and (2) the processing node of *Oreizy* with the recited node of Claim 1 (page 4). Even assuming these correlations could be made, *Oreizy* would still fail to teach or suggest that the processing node determines **running processes** (on the processing node) that will be affected by a software update, as Claim 1 would require.

Because *Oreizy* fails to teach or suggest that a node determines running processes on the node that will be affected by a software update, *Oreizy* must also fail to teach or suggest that the processing node uses module dependencies (or any other type of dependency information) to make this determination.

Based on the foregoing, *Foster* and *Oreizy* fail to teach or suggest, both individually and in combination, all the features of Claim 1. Therefore, Claim 1 is patentable over *Foster* and

Oreizy. Reconsideration and withdrawal of the rejection of Claim 1 under 35 U.S.C. § 103(a) is therefore respectfully requested.

B. CLAIMS 27 AND 53

Independent Claim 27 is a computer-readable storage medium claim and independent Claim 53 is an apparatus claim. Each of Claims 27 and 53 recite features discussed above that distinguish Claim 1 from *Foster* and *Oreizy*. Therefore, each of Claims 27 and 53 is allowable for the reasons given above with respect to Claim 1.

C. DEPENDENT CLAIMS

The dependent claims not discussed thus far are dependent claims, each of which depends (directly or indirectly) on one of the independent claims discussed above. Each of the dependent claims is therefore allowable for the reasons given above for the claim on which it depends. In addition, some of the dependent claims introduce additional limitations that independently render them patentable.

1. Claim 5

For example, Claim 5 depends on Claim 1 and additionally recites:

wherein said node notifies affected processes that the software update is being requested; wherein each notified process evaluates the effect that the software update will have on its operation; wherein if any of the notified processes determine that the software update will degrade or have a negative impact on said node's normal operation, the process returns a veto to said node; and wherein if a process finds that the software update will have no negative effects, the process returns an acceptance of the software update to said node.

The Office action asserts that section 1, 4th paragraph and section 4.3, 2nd paragraph of *Oreizy* discloses Claim 5. This is incorrect. The first cited portion merely states, "Connectors mediate and govern interactions among components, and thereby separate computation from

communication, minimize component interdependencies....” The second cited portion states, “The model rejects upgraded components when they do not satisfy explicit performance and accuracy requirements.” Neither portion corresponds to, for example, “wherein each notified process evaluates the effect that the software update will have on its operation.” Because *Oreizy* fails to even refer to processes that run on a node, *Oreizy* must fail to teach or suggest that such processes return a **veto** or an **acceptance**, as recited in Claim 5.

Reference to the “model” rejecting upgraded components, as taught in *Oreizy*, does not rise to the level of teaching or suggesting that processes running on a node may return a veto. Indeed, that teaching in *Oreizy* suggests that components are upgraded and later determined that those components are not performing as predicted.

2. *Claim 6*

As another example, Claim 6 depends on Claim 5 and additionally recites:

wherein said node waits for all of the notified processes to return results of their evaluations and once all of the processes have reported to said node, said node notifies said master node if any of the processes have vetoed the software update.

The Office action cites the same portions of *Oreizy* in rejecting Claim 6 as were cited in rejecting Claim 5. This is incorrect. No where does *Oreizy* teach or suggest that a node waits for all notified processes to return results.

3. *Claim 7*

As another example, Claim 7 depends on Claim 6 and additionally recites:

wherein if said master node receives an acceptance from said node then said master node sends the set of one or more software packages from said software package storage to said node.

The Office action cites col. 12, lines 43-45 of *Foster* for disclosing Claim 7. This is incorrect. That portion of *Foster* merely states that “the software files required for installation may be

directly downloaded from the remote server onto the local client system.” However, this portion of *Foster* fails to teach or suggest that the downloading of software from a master node to a target node is **conditioned** on receiving **an acceptance** from the target node.

Reconsideration of the dependent claims is respectfully requested.

Due to the fundamental differences already identified, to expedite the positive resolution of this case, a separate discussion of those limitations is not included at this time. Representatives for the applicants reserve the right to further point out the differences between the cited art and the novel features recited in the dependent claims.

II. CONCLUSIONS & MISCELLANEOUS

For the reasons set forth above, all of the pending claims are now in condition for allowance. The Examiner is respectfully requested to contact the undersigned by telephone relating to any issue that would advance examination of the present application.

A petition for extension of time, to the extent necessary to make this reply timely filed, is hereby made. If applicable, a law firm check for the petition for extension of time fee is enclosed herewith. If any applicable fee is missing or insufficient, throughout the pendency of this application, the Commissioner is hereby authorized to any applicable fees and to credit any overpayments to our Deposit Account No. 50-1302.

Respectfully submitted,

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